

W. A. DUNLAP.
 BASIN.
 APPLICATION FILED MAY 7, 1908.

1,051,393.

Patented Jan. 28, 1913.

3 SHEETS—SHEET 1.

FIG. 1.

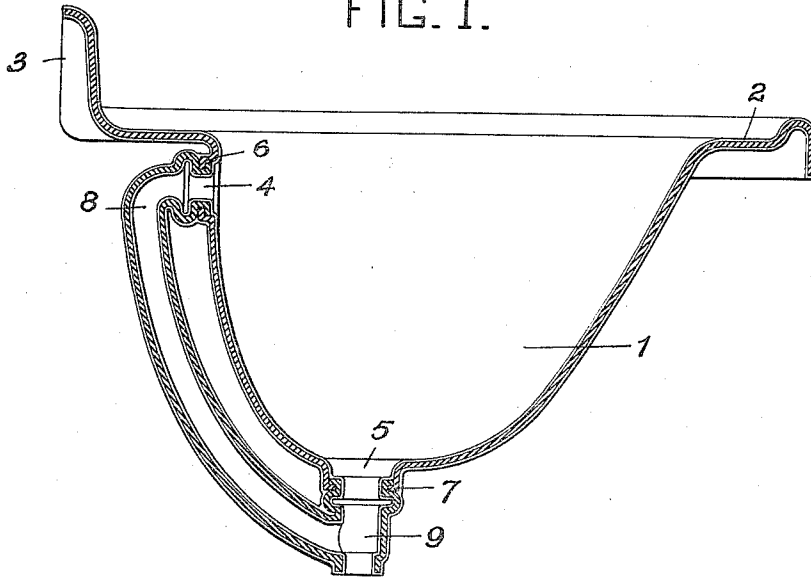


FIG. 2.

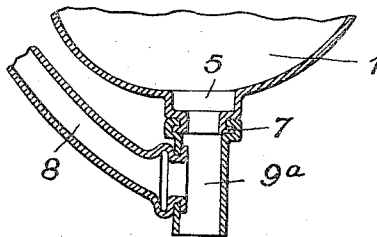
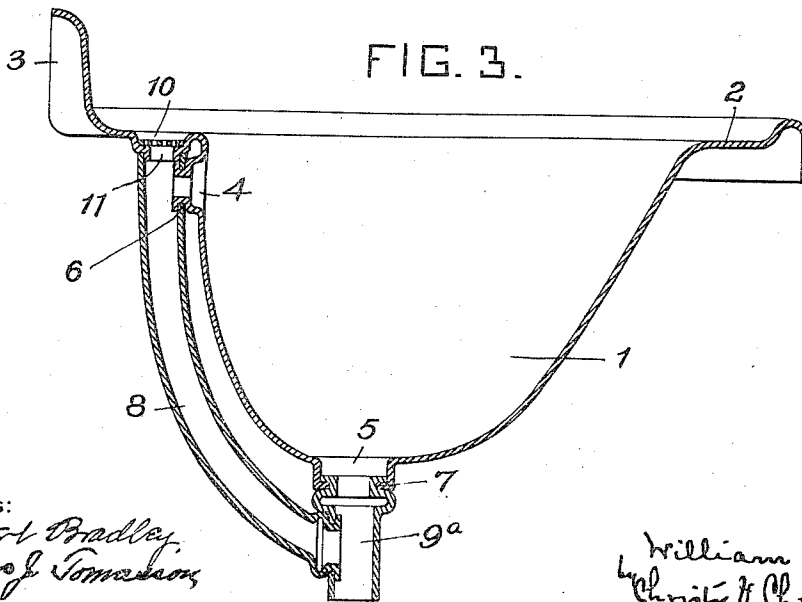


FIG. 3.



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3 SHEETS—SHEET 2.

FIG. 4.

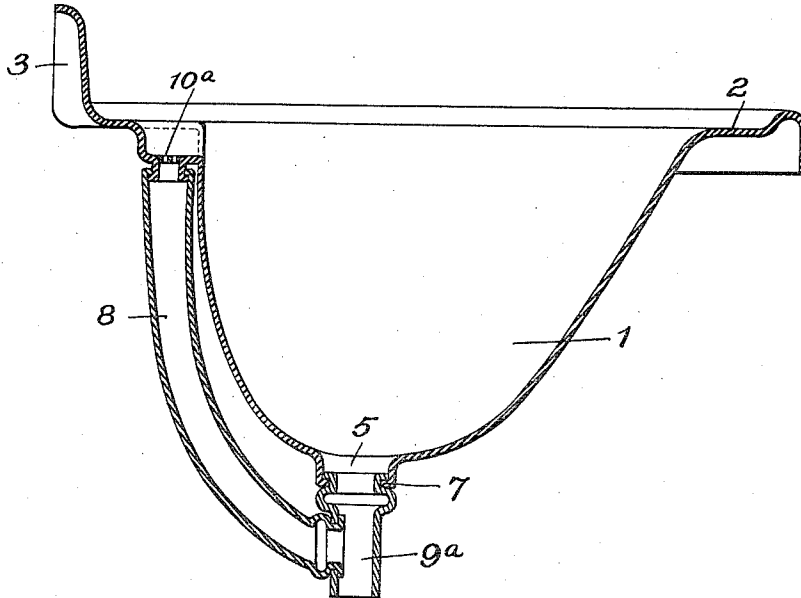
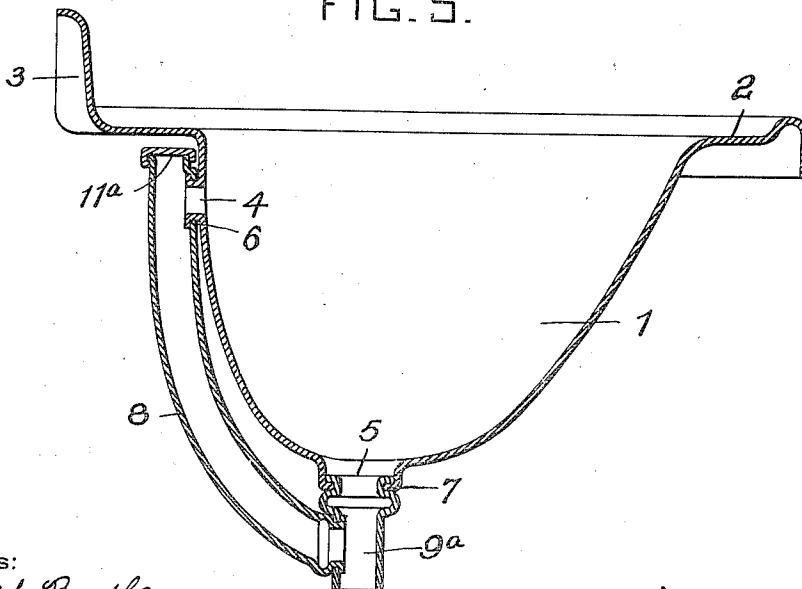


FIG. 5.



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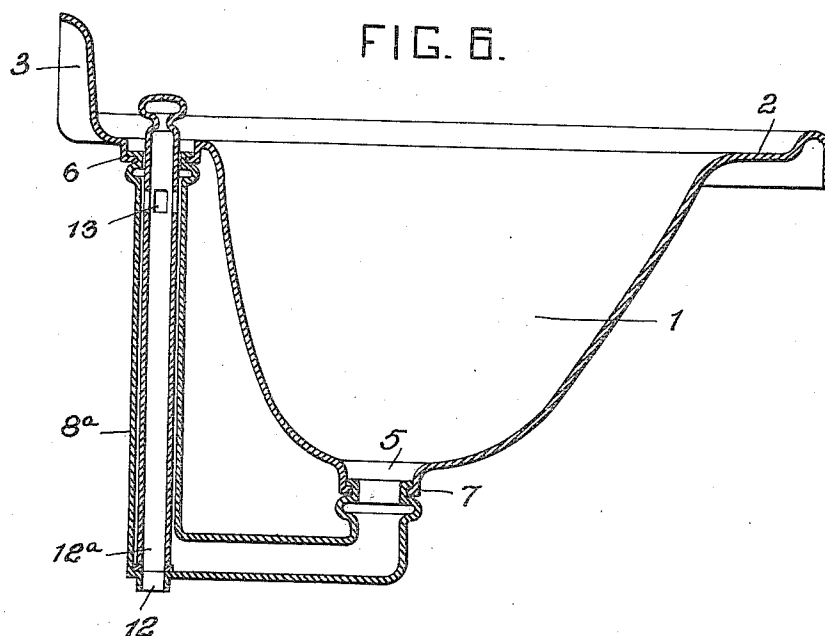
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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BASIN.

1,051,393.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed May 7, 1908. Serial No. 431,387.

To all whom it may concern:

Be it known that I, WILLIAM A. DUNLAP, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Basins, of which the following is a specification.

The invention described herein relates to certain improvements in basins having overflow pipes such as washbowls, sinks, laundry tubs, etc. The overflow pipes of such basins have either been detachably secured to the receptacle at the overflow and regular discharge outlets, or have been formed as a passage in the wall of such basin.

The present invention has for its object a basin formed from an integral sheet of metal by stamping or pressing, and having an overflow pipe permanently secured at its ends to the overflow outlet and the discharge nipple of the bowl.

It is preferred that the basin and overflow pipe and other parts permanently secured thereto should be covered with a protective sealing coating, which should be practically continuous over all parts covering the joints, and binding the several parts into a practically integral structure.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification Figure 1 is a sectional elevation of a wash-bowl having my improvement applied thereto; Fig. 2 is a detail view showing a modification of the manner of connecting the overflow to the discharge nipple; Figs. 3, 4, 5 and 6 are views similar to Fig. 1 illustrating modifications of my improvements.

In the practice of my invention the basin 1 is formed preferably by stamping a sheet of metal of suitable thickness, between dies of suitable shape, according to the article to be produced. In order to facilitate the formation of the bowl and to avoid undue stretching of the metal, it is preferred to first dish or force an annular portion of the sheet which will form the sides adjacent to the bottom, upwardly or to a position the reverse of that which it will have when the bowl is completed. In the next operation this annular portion of the sheet is forced down by suitable dies, forming the upper portion of the bowl and the central portion is forced up. After this second operation

the blank will have an annular concavo-convex portion forming as stated the upper portion of the bowl, and a central portion projecting upwardly. By suitable dies this central convexo-concave is forced down to a concavo-convex shape completing the bowl. By first forcing up or dishing a portion of the sheet, sufficient metal is provided to form the bottom or lower portion of the bowl, and this metal is carried down without any material change by the second operation. In forming wash bowls, flanges or ledges 2 and the back piece 3 are formed and shaped in the stamping operation. Either during this stamping operation or in subsequent operation or operations, openings 4 and 5 are formed through the wall of the bowl, opening 5 being in the lowest part of the basin and forming the usual discharge, while the opening 4 is located at a point near the upper edge of the basin, its position being determined by the highest level of water desired in the basin. The wall of the basin adjacent to these openings is forced outwardly so that in attaching the overflow pipe and the discharge nozzle, no portions of these parts will project into the basin. In thus forcing out the wall of the basin nipples 6 and 7 are formed to which the overflow pipe 8 and discharge nozzle 9 are secured.

As is well known in the art, an enamel which will adhere to one kind of metal as cast iron, will not adhere to another kind as wrought iron or steel. Hence in pounding the overflow pipe and nozzle it was necessary that they should be of the same character of metal as that from which the bowl, etc., were formed *i. e.* wrought iron or steel.

In the construction shown in Fig. 1 the pipe 8 and nozzle 9 are T-shaped and formed integral with each other. The end of the body of the T is bent inwardly and secured to the nipple 6 or the wall of the overflow opening by expanding the tube 8 into engagement with a flange on the nipple 6, as shown in Fig. 1 or by expanding the nipple into engagement with the tube as shown in Figs. 3, 4 and 5. One arm of the T is expanded into engagement with the nipple 7 forming the main discharge from the basin. These joints are similar to those commonly employed in securing tubes in boilers and can be made sufficiently tight to prevent any leakage of water. The other end of the nozzle or arm of the T, is shaped in

any desired or convenient manner for attachment to the waste system.

As shown in Figs. 2, 3, 4 and 5, the nozzle 9^a can be made independent of the overflow pipe 8 and the lower end of the latter expanded into an opening in the side of the nozzle.

As shown in Fig. 3, a portion of the flange 2 may be depressed in the stamping operation or in a subsequent operation, to form a soap pocket 10. This pocket is preferably in line with the overflow and discharge openings, and an opening is formed in the bottom thereof to permit of the overflow pipe being connected thereto by expanding the nipple 11 or end of the overflow pipe one into the other.

As shown in Fig. 4, the soap pocket 10^a may extend into the basin 1 and be made sufficiently deep to serve as a pocket for the soap and also as an overflow outlet.

In the construction shown in Fig. 5 the nipple 6 forming the overflow outlet is expanded into an opening in the side of the overflow pipe 8, the end of said pipe being closed if desired in any suitable manner as by a cap 11^a.

Fig. 6 illustrates the application of my improvement to what is known as the stand-pipe overflow. In this construction the basin has only the discharge opening which is constantly open. The pipe 8^a has one end secured to the nipple 7 of the discharge opening and has the double function of a waste pipe and overflow pipe. The vertical portion of this pipe extends upwardly to the slab or flange 2, and its upper end is secured as heretofore described in line with an opening through the slab or flange, either by expanding its end within said opening, or by expanding the nipple produced in forming the opening, within the end of the tube. An escape opening 12 is formed in the lower end of the vertical portion of the tube, and is closed when the basin is to be filled by the tubular plug 12^a, which is of a diameter less than the internal diameter of the tube 8^a, and has an opening 13 permitting the inflow of water at a point corresponding to the highest point of water desired in the basin.

While I have shown my improvement as embodied in a wash bowl, it will be readily understood by those skilled in the art, that the invention described herein is applicable to a variety of basins, such as sinks, wash-tubs, etc., said invention consisting generally stated in a receptacle or bowl having thin walls and provided with discharge and overflow outlets, the latter being connected to the discharge outlet by a pipe permanently secured to but external of the walls of the bowl. As will be readily understood by those skilled in the art, the overflow pipe may be constructed and secured to the bowl or basin in a variety of ways and hence the

claims are not limited as regards their broad terms to the specific forms shown and described.

After the overflow pipe has been secured in position, the basin and the parts secured thereto are preferably covered with a protective coating which should be applied in such manner that when hardened, it will form a practically continuous coating not only over the surfaces of the basin and overflow but also and especially over all joints, thus binding the receptacle and parts secured thereto into an integral structure. While any suitable material may be employed for coating, it is preferred to employ an enamel, which is preferably applied in a liquid or plastic condition, in order that the inner and outer surfaces may be completely coated.

Heretofore enameled wash basins, sinks, bath tubs, etc., have been made of cast iron and even when the walls are reduced to the least practicable thickness, are so heavy as to preclude the practicability of applying a wet enamel, for the reason that in coating an article with wet enamel, it must be so manipulated that the enamel will be evenly and smoothly distributed over the entire surface. A cast iron basin sink, etc., is too heavy for such a hand operation, and hence the casting must be heated to a bright red heat and the enamel applied thereto in the form of a dry powder usually applied by means of a dredger. It has been found impracticable to apply a hard enamel or one requiring a high heat for vitrification to articles formed of cast iron, as the latter will warp and become distorted when subjected to such high temperatures and hence such articles are generally coated with a soft enamel. Some wash stands have been made of cast iron with a passage in the wall connecting the overflow and discharge openings but have proved to be very unsanitary as the interior surfaces of such passage cannot be enameled for two reasons. First this passage is formed by a sand core and consequently the walls are rough and have sand embedded therein, which cannot at any reasonable expense be removed and hence enamel would not adhere. And second as the article is of cast iron, the enamel must be applied in a dry state for reasons before stated, and cannot be applied to the inner surfaces of the passage. All of these difficulties in manufacture and objectionable features in use are overcome in my improvement. All the surfaces can be readily cleaned before the parts are segregated and can be easily pickled after segregation. The articles when formed of sheet metal, as described are light and can be easily handled and hence a wet enamel can be used and the formation of a continuous coating over all surfaces can be insured by dipping the ar-

article in the liquid composition. And further the article when formed of sheet steel can be subjected to a very high temperature without deformation, thus permitting of the use of hard enamels.

I claim herein as my invention:

1. A sheet metal basin having a discharge opening and an overflow outlet located above the discharge opening, in combination with a tube formed independent of the basin and secured outside of its wall by a folded metal joint, and forming a continuation of the overflow outlet.
2. A sheet metal basin having a discharge opening in combination with a tube formed independent of but permanently secured to the basin and having its lower end connected to the discharge opening by a folded metal joint.
3. A sheet metal basin having a discharge opening and an overflow outlet located above the discharge opening in combination with a tube formed independent of the basin and permanently secured to the basin by folded metal joints and connecting the overflow and discharge outlets.
4. A sheet metal basin having a discharge opening, an overflow outlet and a soap pocket in combination with a tube permanently secured to the basin by folded metal joints and connecting the overflow and soap pocket to the discharge outlet.
5. A sheet metal basin having a discharge opening and an overflow outlet, in combination with a nozzle secured by a folded metal joint to the basin and forming a continuation of the discharge opening, and a tube permanently secured to the basin and the nozzle by folded metal joints.
6. A sheet metal basin having a discharge opening and an overflow outlet in combination with a tube connected to said outlet and opening by folded metal joints, said parts being covered by a continuous coating binding them into an integral structure and sealing the joints.
7. A sheet metal basin having a discharge

opening and an overflow outlet in combination with a tube connected to said outlet and opening by folded metal joints, said parts being covered by a continuous coating of enamel binding them into an integral structure and sealing the joints.

8. A sheet metal basin having a discharge opening and an overflow outlet located above the discharge opening in combination with a tube permanently secured to the basin by a folded metal joint and forming a continuation of the overflow outlet, said parts being covered by a continuous coating binding them into an integral structure and sealing the joints.

9. A sheet metal basin having a discharge opening, an overflow outlet and a soap pocket in combination with a tube permanently secured to the basin by folded metal joints and connecting the soap pocket and overflow to the discharge outlet, said parts being covered with a continuous coating of enamel binding them into an integral structure and sealing the joints.

10. A basin, sink, etc., formed of sheet metal and provided with overflow and discharge openings, in combination with a tube formed of sheet metal and secured to the basin in such a manner as to connect the overflow and discharge openings, the basin and tube having all interior and exterior surfaces covered by a continuous coating of enamel.

11. The method herein described which consists in forming of sheet metal a basin, sink, etc., having discharge and overflow openings, connecting said openings by a tube or passage exterior of the basin or sink, and covering all the exterior and interior surfaces of the article with a continuous protective and impervious coating.

In testimony whereof, I have hereunto set my hand.

WILLIAM A. DUNLAP.

Witnesses:

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FRANCIS J. TOMASSON.